Attachment G-1
Corporate Performance Measures Definitions

Plutonium Metal or Oxide packaged for long-term storage (number of containers): Number of certified DOE storage/treatment/disposal (STD) 3013 containers (or equivalent) of plutonium metal or oxide packaged ready for long-term storage.

Enriched Uranium packaged for long-term storage (number of containers): Number of certified containers packaged ready for long-term storage.

Plutonium or Uranium Residues packaged for disposition (kg of bulk material): Kilograms residue material packaged ready for disposition/disposal.

Depleted and other Uranium packaged for disposition (metric tons): Number of metric tons of depleted and natural uranium packaged in a form suitable for disposition.

Liquid Waste in Inventory eliminated (millions of gallons): Radioactive liquid tank waste (and other forms such as sludge and saltcake) volume is counted when the inventory is reduced. This measure refers to waste traditionally called "high-level" waste, such as waste in the 177 tanks at Hanford. The radioactive liquid tanks waste inventory should not reflect any volume changes due to processing.

Liquid Waste Tanks closed (number of tanks): Tanks are counted when they reach the point of closure; closure is any endpoint as defined in a final, approved record of decision, and may include clean closure or in-place closure for the wastes described in the previous measure.

High-Level Waste packaged for final disposition (number of containers): Containers/canisters ready for disposal.

Spent Nuclear Fuel packaged for final disposition (metric tons of heavy metal [MTHM]): Heavy metal mass of spent nuclear fuel ready for final disposition. Packaging for transport is not included unless no further packaging is required after transport.

Transuranic Waste shipped for disposal (cubic meters): Number of cubic meters transuranic (TRU)/TRU-mixed shipped for disposal at the Waste Isolation Pilot Plant (WIPP).

Low-Level and Mixed Low-Level Waste disposed (cubic meters): Number of cubic meters of low-level and mixed low-level waste disposed. Disposal quantities should include onsite disposal of a site's own waste, waste shipped to a commercial facility for disposal, and waste shipped to another DOE site for disposal. Waste generated from ongoing processing operations should be included in this measure; remediation waste should not be included in this measure.

Material Access Areas eliminated (number of areas): Number of DOE 5633.3B Material Access Areas (MAAs) eliminated. When a MAA is eliminated, DOE-required MAA security and safeguard standards are no longer applied to the area.

Nuclear Facility Completions (number of facilities): Number of nuclear facilities that have reached their end state within the EM program. This endpoint should correspond to one of the following: decommissioning, deactivation, dismantlement, demolishment, or responsibility for the facility is transferred to another program or owner. Facilities should not be reported more than once. If a facility is included in the radioactive or industrial facility measures, it should not be reported in the nuclear facility measure.

Radioactive Facility Completions (number of facilities): Number of radioactive facilities that have reached their end state within the EM program. This endpoint should correspond to one of the following: decommissioning, deactivation, dismantlement, demolishment, or responsibility for the facility is transferred to another program or owner. Facilities should not be reported more than once. If a facility is included in the nuclear or industrial facility measures, it should not be reported in the radioactive facility measure.

Industrial Facility Completions (number of facilities): Number of industrial facilities that have reached their end state within the EM program. This endpoint should correspond to one of the following: decommissioning, deactivation, dismantlement, demolishment, or responsibility for the facility is transferred to another program or owner. Facilities should not be reported more than once. If a facility is included in the nuclear or radioactive facility measures, it should not be reported in the industrial facility measure.

Remediation Complete (number of release sites: A release site is considered complete after regulatory approval is obtained and no additional EM resources are required except for long-term stewardship. This will occur after an assessment or evaluation (i.e., no action decision), or after active remediation is complete.

Geographic Sites eliminated (number of sites): A site in its entirety (e.g., Fernald) is "complete" when active remediation has been completed in accordance with the terms and conditions of cleanup agreements (e.g., records of decision, permits). Stewardship or non-EM activities may be on going after site completion. *For further discussion see the February 12, 3003 memorandum issued by EM-1, which follows the definitions.*

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United States Government **Department of Energy**

memorandum

DATE: February 12, 2003

REPLY TO
ATTN OF: EM-22.2 (Steve Golian, 301-903-7791)

SUBJECT: Definition of Environmental Management Completion

TO: Distribution

The purpose of this memorandum is to provide you with additional clarification on: 1) the specific activities that must be accomplished before an environmental cleanup project is complete; and 2) the specific activities that need to be accomplished before the Office of Environmental Management's (EM) responsibility for a site, or portions of a site, is complete.[1] The attached fact sheet, which defines various terms relating to environmental cleanup, has been prepared to facilitate consistency across the complex for demonstrating/documenting when EM's responsibilities at a site have ended, and any remaining long-term management responsibilities should be administratively transferred to another Lead Program Secretarial Office (whenever DOE has a continuing mission at the site) or other entity. *DOE site closure is not required for EM completion.*

Site managers should ensure their respective site baselines, especially any assumptions regarding the operational and monitoring costs of long-term remedial actions, are reflected in accordance with these definitions.

If you have any questions regarding these definitions, please contact me at (202) 586-7709 or Ms. Cynthia Anderson, Corporate Project Manager for the National FOCUS Project at (803) 725-3966 or cynthia.anderson@srs.gov.

Jessie Hill Roberson
Assistant Secretary for
Environmental Management

Attachment

[1]Criteria to attain "project closeout" (CD-4) for environmental projects will vary depending on the specific type of remedial activities being performed. Project-completion criteria/guidelines for specific remedial technologies will be issued shortly.

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Office of Environmental Management Corporate Projects Initiative

National FOCUS Project

January 2003

Definition of EM Completion and DOE Site Closure

This fact sheet defines critical points in the cleanup process, specifies where the Office of Environmental Management (EM) programmatic responsibility ends, and clarifies the responsibilities of other Program Secretarial Offices managing a site after EM's mission is complete. Accordingly, these definitions serve as the framework for developing or revising strategic plans, site baselines, and implementation plans.

Environmental Management (Cleanup) includes those activities necessary to evaluate and mitigate a release or threat of release of a hazardous substance that may pose a risk to human health or the environment. Cleanup activities may include source term remediation, facility disposition, ground water response measures, surface water response measures, and legacy waste management (e.g., transuranic and orphan waste disposition). The term *cleanup* is used interchangeably with the terms *remedial action*, *removal action*, *response action*, and *corrective action*.

Response Action Completion occurs when a specific response attains its response action objective(s)/cleanup criteria such that no land use restrictions remain (e.g., contaminant concentrations reduced to acceptable, health-based levels in ground water).

EM Completion occurs when: 1) all required short-term response activities at a specific site are complete (e.g., soil excavation, cap construction, building decommissioning); 2) all required long-term response measures (e.g., ground water treatment systems) are constructed and determined to be operational and functional; 3) all necessary documentation is in place (e.g., engineering certifications/and verifications, post-closure or operating permits, final site condition/configuration records); and 4) the site is administratively transferred from EM responsibility to another DOE, Federal, State or private entity.[1,2,3]

Long-Term Response Action (LTRA) comprises the set of activities at a site, following EM completion, that are required as a result of ongoing operations, maintenance, or monitoring that is necessary to manage residual contamination above levels allowing unrestricted uses. For some response actions (e.g., capped burial grounds or containment cells for long-lived radionuclide metals), LTRA activities will be required indefinitely.

DOE Site Closure occurs (for non-DOE owned sites) with the cessation of any DOE mission at the site, or (for DOE-owned sites) when ownership of all real property is

[1] After response action objectives or cleanup criteria have been achieved, any necessary dismantling/ decommissioning of remediation facilities will be conducted as part of the LTRA scope.

[2] Should DOE determine that it is appropriate to initiate additional response measures following EM Completion, either to enhance remedy performance or reduce lifecycle project costs, these efforts will be conducted as part of the LTRA scope.

[3] DOE will maintain liability for any residual wastes left onsite unless, as part of a transfer agreement, the receiver has agreed to assume future liability.

transferred to a non-DOE entity. *DOE site closure is not required for EM completion*.

In most situations, there will be multiple response actions initiated over a period of months or years at a site and therefore, individual projects will reach "Project Closeout" (CD-4) prior to EM completion.[4] In these cases, EM will be responsible for operation and maintenance (O&M) activities until the project or site is administratively transferred, at which time the O&M activities become to LTRA activities. The critical points defined above are illustrated in Figures 1 and 2.

Administrative Transfer of programmatic responsibility or ownership can be accomplished in one of three ways:

1. *Programmatic responsibility is transferred (or returned) to another DOE office* (responsibilities include administration, asset management, legal, regulatory and financial responsibilities);
2. *Ownership is transferred to another federal governmental agency*. If a response action is ongoing, transfer entails demonstration that the remedy is operational and functional—that is, the response system is in place and operating as designed (e.g., system pumping and treating *x* gallons of ground water per minute). Transfer of responsibility for an ongoing ground water remediation should include formal documentation of an exit strategy (See Highlight 1).
3. *Ownership is transferred to a state governmental agency or a private entity*. For National Priorities List sites, transfer of property to a state agency or a private entity entails meeting the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act section 120(h). This includes demonstrating that the remedy is operating properly and successfully (i.e., performance data demonstrate the system is performing as expected and will likely achieve the cleanup criteria or response action objectives as intended.)

Highlight 1 – Exit Strategies

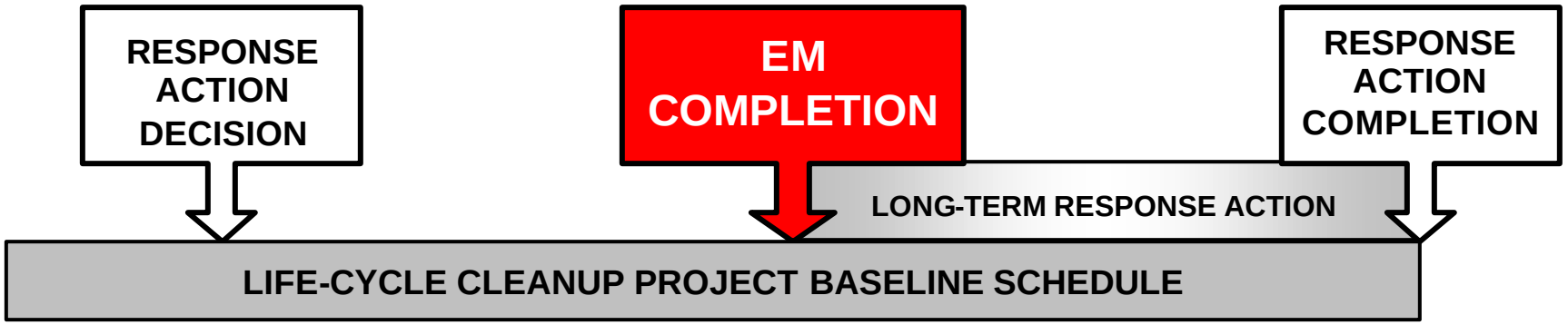
An exit strategy comprises the set of information that will be used to demonstrate the desired performance has been achieved, the cleanup criteria have been met and the associated activities (e.g., treatment systems, monitoring) can be terminated. Exit strategies contain four essential elements:

1. A description of the objective of the activity,
2. A performance "model" that describes the expected course of the remediation process,
3. A listing of the performance metrics, decision criteria, and endpoints that will be used to assess how the response is progressing and demonstrate when the objective has been reached; and
4. Contingency plan that will be implemented if data indicate that objectives will not be met.

For more information on exit strategies, see the related fact sheet, *Developing Exit Strategies for Environmental Restoration Projects*, March 2000.

[4] As specified in DOE Order 413.3, "Project Closeout" (Critical Decision-4) for environmental management projects is the point at which a project may proceed to EM Completion.

Figure 1. Conceptual Depiction of EM Completion



RESPONSE ACTION DECISION: Required remedial/response measures are adequately defined, agreed to with regulatory agencies, and documented in a CERCLA Record of Decision, RCRA Permit Modification, or equivalent decision document.

EM COMPLETION: All required short-term response activities (e.g., soil excavation, cap construction, building decommissioning) at a specific site are complete; all required long-term response measures (e.g., groundwater treatment systems) are constructed and are operational and functional; all required documentation (e.g., certifications/verifications, post-closure or operating permits, final site conditions/configuration records) is in place; and the site is administratively transferred from EM responsibility to another DOE, Federal, State, or private entity.

LONG-TERM RESPONSE ACTION (LTRA): Set of activities at a site, following EM completion, that are required as a result of ongoing operations, maintenance, or monitoring that is necessary to manage residual contamination above levels allowing unrestricted uses.

RESPONSE ACTION COMPLETION: Response action attains its specific response action objectives/cleanup criteria (e.g., contaminant concentrations reduced to acceptable, health-based levels in ground water), such that no land use restrictions remain. *[Note: For some response actions (e.g., capped burial grounds or containment cells for long-lived radionuclides), LTRA activities will be required indefinitely.]*

Figure 2. Conceptual Depiction of EM Completion at a Site where Multiple Response Actions are Initiated Over an Extended Period of Time